prescription (OCS) or hospitalisation, no change in maintenance therapy and a mean daily short-acting b2-agonist (SABA) consumption < 0.5 doses/day. Baseline demographics, co-morbidity and asthma medication before TI was used to construct regression models to control for factors potentially influencing outcomes. **RESULTS:** Respectively, 2701 and 7320 patients were included in the BUD/FORM and SAL/FLU cohorts, respectively, with no significant difference in age, gender, co-morbidity, ICS dose, SABA use or hospitalisations at baseline while active smokers, asthma consultations and OCS prescriptions were slightly lower in the BUD/FORM group. Use of SABA and asthma consultations decreased in both cohorts following TI. In unadjusted analysis a higher proportion of treatment success was seen in the BUD/FORM group following TI compared to SAL/FLU (25.3 vs. 23.0%, $p < 0.05$). This result was driven by fewer patients in the BUD/FORM group with an OCS prescription and high SABA use. In multivariate binary regression analysis, BUD/FORM was not significantly associated with greater odds of success than SAL/FLU (OR, 95% CI: 1.11, 0.99–1.23). Variables significantly associated with success were age, female sex, no rhinitis and low OCS and SABA use pre TI. Resource use (hospitalisations and asthma consultations) was similar between groups post TI. **CONCLUSION:** Initiating treatment with BUD/FORM or SAL/FLU in real-life practice improved outcomes to a similar magnitude, although there were trends to better outcomes associated with BUD/FORM.

RS2

RESOURCE USE AND FINANCIAL IMPACT OF CRITICALLY ILL PATIENTS WITH PNEUMONIA AND RESPIRATORY FAILURE IN THE UNITED STATES

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OBJECTIVES: Patients with pneumonia and respiratory failure usually require intensive care unit (ICU) admission. Because of high acuity and the need for expensive interventions, concern exists over the ability of DRG reimbursement to cover inpatient costs. This study evaluated the costs and DRG reimbursement associated with the care of pneumonia and concurrent respiratory failure. **METHODS:** Forty-six consecutive patients with complete data sets enrolled in the VALID study, a phase III multicenter study evaluating recombinant SP-C-based surfactant treatment (Venticute®, ALTANA, Konstanz, Germany) in patients with pneumonia and respiratory failure, in 9/2006 were included. Total costs (ICU/non-ICU) were assessed, assumed daily costs were $1,238 (US$) for ICU without ventilation, $2,760 with ventilation, $1,004 for stepdown, and $770 for ward. FY07 reimbursement was determined by multiplying the relative weight for each DRG code by a base rate of US$6,000. For outlier payment calculations, the threshold for FY2006 of $23,300.00 was used. Costs above regular reimbursement plus this threshold were reimbursed at 80%. **RESULTS:** Mean age was 53.2 + 16.3 (mean + SD), with a mean APACHE II score of 17.4 + 6.4. Mean hospital LOS = 29 days, with mean ICU, stepdown, and ward LOS of 22, 2 and 5 days respectively. Mean duration of ventilation was 17 days (range 2–49). Total costs averaged $58,242, with 46.1% of all costs accounting for ICU care (excluding ventilation), 44.0% for ventilation, and 103.5% and 6.4% for stepdown and ward respectively. Across all DRGs, the average shortfall (cost minus reimbursement) equaled $20,897 with a loss occurring in 36/47 (76.6%) patients. **CONCLUSION:** This preliminary analysis suggests that DRGs fail to cover costs associated with pneumonia and respiratory failure. This potentially places hospitals that care for these patients at significant financial risk and suggests the needs for revision in reimbursement schemes to insure a more equitable payment relative to expected resource consumption.

RS3

IMPACT OF SOCIO-ECONOMIC FACTORS ON PATIENTS' KNOWLEDGE OF THEIR CONDITION, INVOLVEMENT IN TREATMENT DECISIONS AND THE SUBSEQUENT COMPLIANCE WITH THEIR TREATMENT REGIMEN

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OBJECTIVES: It is hypothesised that socio-economic factors play a key role in determining treatment patterns. This study investigated the impact of employment and gender on asthma treatment patterns in 2526 patients in the US, Germany and Spain. **METHODS:** The data were drawn from the Adelphi Disease Specific Programme (DSP) in asthma, a cross-sectional study of consulting patients undertaken in 2007. Data were collected by doctors who were asked to include the next 6 patients consulting for asthma from a specified start date. Key factors analysed were gender and employment status (skilled, unskilled, and unemployed). Chi-square and Fisher's exact tests were used to test for differences. **RESULTS:** There was a significant relationship between employment status and patients' level of knowledge about their condition. Skilled workers had a higher level of knowledge as compared to unskilled workers (US: 37.3% vs. 18.3%, $p < 0.001$; Germany: 35.3% vs. 22.5%, $p < 0.05$; Spain: 26.7% vs. 15.9%, $p = 0.06$). Skilled workers also had more involvement in treatment decisions (US: 50.0% vs. 32.3%, $p < 0.001$; Germany: 35.3% vs. 18.8%, $p < 0.001$; Spain: 21.6% vs. 13.4%, $p = 0.1$) and were rated more compliant than unskilled workers (US: 56.3% vs. 37.1%, $p < 0.001$; Germany: 45.3% vs. 28.4%, $p < 0.01$; Spain: 35.1% vs. 23.2%, $p = 0.06$). There were no significant differences between genders other than Spain where significantly more men had a higher level of knowledge about their condition (24.5% vs. 17.2%, $p < 0.01$) and more involvement in their treatment (20.9% vs. 14.5%, $p < 0.05$). In all countries a significant positive correlation was found between level of involvement and compliance with treatment ($p < 0.01$). **CONCLUSION:** There are significant differences in knowledge, involvement and compliance between socio-economic groups in the US, Germany and Spain. The significant correlation between level of involvement and compliance may indicate that if physicians made particular efforts with lower socio-economic groups in treatment decisions compliance levels would improve.

RS4

ASTHMA COSTS AND UTILIZATION IN A MANAGED CARE ORGANIZATION

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OBJECTIVES: To compare medical costs and utilization in patients on single controller inhaled corticosteroid (ICS) to other asthma drug regimens. Medical costs and health care utilization associated with asthma and the variation by treatment are poorly understood. **METHODS:** Direct medical costs and utilization were captured from administrative electronic databases from

continuously-enrolled health plan members with asthma aged 5 years or older with comprehensive medical and drug coverage. Asthma patients were identified during 2002, categorized into 14 asthma drug treatment groups based on 2003 prescription records, and had total medical costs and utilization determined in 2004, adjusting for demographics, insurance types, asthma risk, co-morbidity, and treatment selection propensity scores. **RESULTS:** In total, 96,631 patients met the study eligibility criteria. Patients averaged 37.5 + 23.1 years of age and were 57% female, 14% Medicare, 4% Medicaid, and had a median family income of $64,967 + 29,285. Total unadjusted direct medical costs/patient/year averaged $3745 ($3298 low asthma risk versus $6797 high asthma risk, $p < 0.0001$). Adjusted total and asthma-related costs were significantly lower with single controller ICS compared to single controller leukotriene modifiers ($p < 0.0001$) and most combination controller regimens ($p < 0.05$ to $p < 0.0001$). Additionally, single controller ICS compared to single controller leukotriene modifiers and combination controllers was associated with significantly lower asthma-related utilization. **CONCLUSION:** Both costs and asthma-related utilizations are significantly less in the year after being dispensed single controller ICS compared to single controller leukotriene modifiers or combination controllers. These findings from a typical practice setting provide economic support for international guidelines that recommend single controller ICS as the preferred initial asthma controller treatment.